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1600

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/677,653

DATE: 01/16/2003
TIME: 12:05:36

Input Set : A:\A-58631-4.txt
Output Set: N:\CRF4\01162003\I677653.raw

SEQUENCE LISTING

ENTERED

- 3 (1) GENERAL INFORMATION:

4 (i) APPLICANT: P. D. CHRISTIAN, K. H. J. GORDON and

5 T. N. HANZLIK

6 (ii) TITLE OF INVENTION: INSECT VIRUSES AND THEIR USES IN

7 PROTECTING PLANTS

8 (iii) NUMBER OF SEQUENCES: 53

9 (iv) CORRESPONDENCE ADDRESS:

10 (A) ADDRESSEE: DORSEY & WHITNEY LLP

11 (B) STREET: FOUR EMBARCADERO CENTER, SUITE 3400

12 (C) CITY: SAN FRANCISCO

13 (D) STATE: CALIFORNIA

14 (E) COUNTRY: UNITED STATES OF AMERICA

15 (F) ZIP: 94111

16 (v) COMPUTER READABLE FORM:

17 (A) MEDIUM TYPE: Floppy disk

18 (B) COMPUTER: IBM PC compatible

19 (C) OPERATING SYSTEM: PC-DOS/MS-DOS

20 (D) SOFTWARE: PatentIn Release #1.0, Version #1.25

21 (vi) CURRENT APPLICATION DATA:

22 (A) APPLICATION NUMBER: US/09/677,653

23 (B) FILING DATE: 03-Oct-2000

24 (C) CLASSIFICATION:

25 (vii) ATTORNEY/AGENT INFORMATION:

26 (A) NAME: RICHARD F. TRECARTIN

27 (B) REGISTRATION NUMBER: 31,801

28 (C) REFERENCE/DOCKET NUMBER: A-58631-4/RFT/NBC

29 (ix) TELECOMMUNICATION INFORMATION:

30 (A) TELEPHONE: (415) 781-1989

31 (2) INFORMATION FOR SEQ ID NO: 1:

32 (i) SEQUENCE CHARACTERISTICS:

33 (A) LENGTH: 13 base pairs

34 (B) TYPE: nucleic acid

35 (C) STRANDEDNESS: single

36 (D) TOPOLOGY: linear

37 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

38 GGATCCACAG NNN

39 (2) INFORMATION FOR SEQ ID NO: 2:

40 (i) SEQUENCE CHARACTERISTICS:

41 (A) LENGTH: 28 base pairs

42 (B) TYPE: nucleic acid

43 (C) STRANDEDNESS: single

44 (D) TOPOLOGY: linear

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58	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:	
60	ATGGGCGATG CCGGCCTCGC GTTCACAG	28
62	(2) INFORMATION FOR SEQ ID NO: 3:	
63	(i) SEQUENCE CHARACTERISTICS:	
64	(A) LENGTH: 27 base pairs	
65	(B) TYPE: nucleic acid	
66	(C) STRANDEDNESS: single	
67	(D) TOPOLOGY: linear	
69	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:	
71	ATGGAGGATG CTGGAGTGGC GTCACAG	27
73	(2) INFORMATION FOR SEQ ID NO: 4:	
74	(i) SEQUENCE CHARACTERISTICS:	
75	(A) LENGTH: 27 base pairs	
76	(B) TYPE: nucleic acid	
77	(C) STRANDEDNESS: single	
78	(D) TOPOLOGY: linear	
80	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:	
82	ATGAGCGAGG CGGGCGTCGC GTCACAG	27
84	(2) INFORMATION FOR SEQ ID NO: 5:	
85	(i) SEQUENCE CHARACTERISTICS:	
86	(A) LENGTH: 30 base pairs	
87	(B) TYPE: nucleic acid	
88	(C) STRANDEDNESS: single	
89	(D) TOPOLOGY: linear	
91	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:	
93	CCATCGATGC CGGACTGGTA TCCCAGGGGG	30
96	(2) INFORMATION FOR SEQ ID NO: 6:	
97	(i) SEQUENCE CHARACTERISTICS:	
98	(A) LENGTH: 31 base pairs	
99	(B) TYPE: nucleic acid	
100	(C) STRANDEDNESS: single	
101	(D) TOPOLOGY: linear	
103	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:	
105	CCATCGATGC CGGACTGGTA TCCCAGGGGA C	31
107	(2) INFORMATION FOR SEQ ID NO: 7:	
108	(i) SEQUENCE CHARACTERISTICS:	
109	(A) LENGTH: 39 base pairs	
110	(B) TYPE: nucleic acid	
111	(C) STRANDEDNESS: single	
112	(D) TOPOLOGY: linear	
114	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:	
116	CCATCGATGA TCCAGCCTCC TCGCGGCCGGATGGGCA	39
118	(2) INFORMATION FOR SEQ ID NO: 8:	
119	(i) SEQUENCE CHARACTERISTICS:	
120	(A) LENGTH: 39 base pairs	
121	(B) TYPE: nucleic acid	
122	(C) STRANDEDNESS: single	
123	(D) TOPOLOGY: linear	
125	(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:	

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127 GCTCTAGATC CATTGCCAT CCGAAGATGC CCATCCGGC	39
129 (2) INFORMATION FOR SEQ ID NO: 9:	
130 (i) SEQUENCE CHARACTERISTICS:	
131 (A) LENGTH: 39 base pairs	
132 (B) TYPE: nucleic acid	
133 (C) STRANDEDNESS: single	
134 (D) TOPOLOGY: linear	
136 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:	
138 CCATCGATT ATGCCGAGAA GGTAACCAGA GAAACACAC	39
140 (2) INFORMATION FOR SEQ ID NO: 10:	
141 (i) SEQUENCE CHARACTERISTICS:	
142 (A) LENGTH: 39 base pairs	
143 (B) TYPE: nucleic acid	
144 (C) STRANDEDNESS: single	
145 (D) TOPOLOGY: linear	
147 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:	
149 GCTCTAGACC AGGTAAATATA CCACAACGTG TGTTTCTCT	39
152 (2) INFORMATION FOR SEQ ID NO: 11:	
153 (i) SEQUENCE CHARACTERISTICS:	
154 (A) LENGTH: 45 base pairs	
155 (B) TYPE: nucleic acid	
156 (C) STRANDEDNESS: single	
157 (D) TOPOLOGY: linear	
159 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:	
161 GGGGGGAATT CATTAGGTG ACACTATAGT TCTGCCTCCC CGGAC	45
163 (2) INFORMATION FOR SEQ ID NO: 12:	
164 (i) SEQUENCE CHARACTERISTICS:	
165 (A) LENGTH: 27 base pairs	
166 (B) TYPE: nucleic acid	
167 (C) STRANDEDNESS: single	
168 (D) TOPOLOGY: linear	
170 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:	
172 GGGGGGATCC TGGTATCCCA GGGGGGC	27
174 (2) INFORMATION FOR SEQ ID NO: 13:	
175 (i) SEQUENCE CHARACTERISTICS:	
176 (A) LENGTH: 28 base pairs	
177 (B) TYPE: nucleic acid	
178 (C) STRANDEDNESS: single	
179 (D) TOPOLOGY: linear	
181 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:	
183 CCGGAAGCTT GTTTTCTTT CTTTACCA	28
185 (2) INFORMATION FOR SEQ ID NO: 14:	
186 (i) SEQUENCE CHARACTERISTICS:	
187 (A) LENGTH: 46 base pairs	
188 (B) TYPE: nucleic acid	
189 (C) STRANDEDNESS: single	
190 (D) TOPOLOGY: linear	
192 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:	
194 GGGGGATCCG ATGGTATCCC GAGGGACGCT CAGCAGGTGG CATAGG	46

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196 (2) INFORMATION FOR SEQ ID NO: 15:	
197 (i) SEQUENCE CHARACTERISTICS:	
198 (A) LENGTH: 52 base pairs	
199 (B) TYPE: nucleic acid	
200 (C) STRANDEDNESS: single	
201 (D) TOPOLOGY: linear	
203 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:	
205 AAATAATTT GTTACTTAG AAGGAGATAT ACATATGAGC GAGCGAGCAC AC	52
207 (2) INFORMATION FOR SEQ ID NO: 16:	
208 (i) SEQUENCE CHARACTERISTICS:	
209 (A) LENGTH: 55 base pairs	
210 (B) TYPE: nucleic acid	
211 (C) STRANDEDNESS: single	
212 (D) TOPOLOGY: linear	
214 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:	
216 AAATAATTT GTTTAACCTT AAGAAGGAGA TCTACATATG CTGGAGTGGC GTCAC	55
218 (2) INFORMATION FOR SEQ ID NO: 17:	
219 (i) SEQUENCE CHARACTERISTICS:	
220 (A) LENGTH: 30 base pairs	
221 (B) TYPE: nucleic acid	
222 (C) STRANDEDNESS: single	
223 (D) TOPOLOGY: linear	
225 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:	
227 GGAGATCTAC ATATGGGAGA TGCTGGAGTG	30
229 (2) INFORMATION FOR SEQ ID NO: 18:	
230 (i) SEQUENCE CHARACTERISTICS:	
231 (A) LENGTH: 17 base pairs	
232 (B) TYPE: nucleic acid	
233 (C) STRANDEDNESS: single	
234 (D) TOPOLOGY: linear	
236 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:	
238 GTAGCGAACG TCGAGAA	17
240 (2) INFORMATION FOR SEQ ID NO: 19:	
241 (i) SEQUENCE CHARACTERISTICS:	
242 (A) LENGTH: 31 base pairs	
243 (B) TYPE: nucleic acid	
244 (C) STRANDEDNESS: single	
245 (D) TOPOLOGY: linear	
247 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:	
249 GGGGGATCCT CAGTTGTCAG TGGCGGGGTA G	31
251 (2) INFORMATION FOR SEQ ID NO: 20:	
252 (i) SEQUENCE CHARACTERISTICS:	
253 (A) LENGTH: 28 base pairs	
254 (B) TYPE: nucleic acid	
255 (C) STRANDEDNESS: single	
256 (D) TOPOLOGY: linear	
258 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:	
260 GGGGATCCCT AATTGGCACG AGCGGCAC	28
263 (2) INFORMATION FOR SEQ ID NO: 21:	

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264      (i) SEQUENCE CHARACTERISTICS:
265          (A) LENGTH: 29 base pairs
266          (B) TYPE: nucleic acid
267          (C) STRANDEDNESS: single
268          (D) TOPOLOGY: linear
270      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:
272 AATTACATAT GGCGGCCGCC GTTTCTGCC                                29
274 (2) INFORMATION FOR SEQ ID NO: 22:
275      (i) SEQUENCE CHARACTERISTICS:
276          (A) LENGTH: 29 base pairs
277          (B) TYPE: nucleic acid
278          (C) STRANDEDNESS: single
279          (D) TOPOLOGY: linear
281      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:
283 AATTACATAT GTTCGGGCC GCCGTTTCT                                29
285 (2) INFORMATION FOR SEQ ID NO: 23:
286      (i) SEQUENCE CHARACTERISTICS:
287          (A) LENGTH: 19 amino acids
288          (B) TYPE: amino acid
289          (C) STRANDEDNESS: single
290          (D) TOPOLOGY: linear
292      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:
294      Phe Ala Ala Ala Val Ser Ala Phe Ala Ala Asn Met Leu Ser Ser Val
295      1           5           10           15
296      Leu Lys Ser
299 (2) INFORMATION FOR SEQ ID NO: 24:
300      (i) SEQUENCE CHARACTERISTICS:
301          (A) LENGTH: 20 amino acids
302          (B) TYPE: amino acid
303          (C) STRANDEDNESS: single
304          (D) TOPOLOGY: linear
306      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:
308      Pro Thr Leu Val Asp Gln Gly Phe Trp Ile Gly Gly Gln Tyr Ala Leu
309      1           5           10           15
310      Thr Pro Thr Ser
311      20
313 (2) INFORMATION FOR SEQ ID NO: 25:
314      (i) SEQUENCE CHARACTERISTICS:
315          (A) LENGTH: 6 amino acids
316          (B) TYPE: amino acid
317          (C) STRANDEDNESS: single
318          (D) TOPOLOGY: linear
320      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:
322      Phe Ala Ala Ala Val Ser
323      1           5
324 (2) INFORMATION FOR SEQ ID NO: 26:
326      (i) SEQUENCE CHARACTERISTICS:
327          (A) LENGTH: 23 base pairs
328          (B) TYPE: nucleic acid

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VERIFICATION SUMMARY
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L:27 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:28 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]